

Work Order ID 110308

110308

Page 1

February-13-14 1:19:11 PM

Item ID: D4151-3 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Upper Hardpoint Plate
 Start Date: 17/12/2013 Start Qty: 40.00 *40* Cust Item ID:
 Required Date: 17/12/2013 Req'd Qty: 40.00 *40* Customer:
 Reference:

Approvals: Process Plan: AA Date: 14-02-13 Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr | Revision Nbr | | | | | | | | |
| D4151 | C | | | | | | | | |

100

0.00

100

Waterjet
 FLOW.CNC Waterjet

Memo

Cut as per dwg D4151
 Prog Rev: _____
 Dwg Rev: _____

ISSUE PO P023011

POSSIBLE SUPPLIER: LOEBACK WATERJET

SCRAP

cmf 2/12/14

105

0.00

105

Packaging
 Packaging

Memo

Receive & Inspect for Damage & Mat'l Certs

0.00

14410/9 (40)

→
 PTO

DQA:

Date: 14/06/24



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: 14/6/16

Work Order update only ☐

| | | | | | |
|---------------------------|---|--|------------------------------------|--|--------------------------------------|
| Work Order: <u>110308</u> | DISPOSITION Rework <input type="checkbox"/> Scrap <input checked="" type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS | | | |
| Part No. <u>D4151-3</u> | | Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> |
| NCR No. <u>14-3872</u> | | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> |
| | | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> |
| | | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input checked="" type="checkbox"/> | |

| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|-------------------------------------|------|-----|--|--------------------|------------------------|------------------------------|------------------------------|--|
| Design | | | | | | | | | |
| Doc/Data | | | | | | | | | |
| Equip/Tooling | 14/5/16 | 100 | 40 | Scrap part held Qty one over 212 0.252 / 0.259 ± .003 critical dimension RC supplier / NCR 143872 | DAS 16 9-89 | Scrap and Destroyed | DAS 27 9-89 14/5/16 | DAS 27 9-89 14/5/22 | DAS 16 9-89 B52 042 14/05/16 |
| Handling/Pre | | | | | | | | | |
| Material | | | | | | | | | |
| Operator | | | | | | | | | |
| Offset/Setup | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | <input checked="" type="checkbox"/> | | | | Q22042 14/05/16 | | | | |
| Training | | | | | | | | | |
| Transport | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| | | | | |
|--|--|---|--|---|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge | <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input checked="" type="checkbox"/> Other |
| <u>supplier</u> | | | | |

Supplier Non-Conformance Report

| |
|-----------------|
| Reviewed |
| DQA: |
| Date: |

Printed on: Friday, May 16, 2014

| | | | |
|--|-----------------------|---|-----------------------------------|
| Details | | | |
| Raised Date 5/16/2014 | Status Open | Owner Gregoire, Michael | Number NCR14-3872 |
| Target Date 5/23/2014 | Standard | Severity MAJOR | |
| Process Quality Inspection | | Audit | |
| Raised By Person Downing, Eric M | | Raised Against (Department or Supplier) Loebsack Waterjet Canada Ltd. | Fault Category Supplier |
| Details PO 23011 form Loebsack waterjet that D4148-1 B112245, D4151-1 B112572, D4151-3 B110308, D4149-1 B112484 are all scrap due to 0.252 +.003 / -.000 measuring 0.250" - 0.260" | | | |
| Keywords | | Product | |
| Document | | Root Cause Supplier | |
| Closed By | Closed Date | Resolution | |

| | | | |
|---------------------------------|---------------------------------|--------------------|------------------|
| Corrective Action | | | |
| Target Date 5/23/2014 | Owner Lavoie, Chantal | Closed Date | Closed By |
| Details | | | |

| | | | |
|---|-------------------|--------------------|-----------------------|
| Actions | | | |
| Number | Owner | Target Date | Completed Date |
| Details | | Response | |
| 1 | Gregoire, Michael | 5/23/2014 | |
| Contact Supplier and obtain corrective action | | | |
| 2 | Downing, Eric M | 5/23/2014 | |
| Scrap D4149-1 B112484 qty x60pcs | | | |
| 3 | Downing, Eric M | 5/23/2014 | |
| scrap D4151-3 B110308 qty x40pcs | | | |

| | | | |
|-----------------------------------|-----------------|-----------|--|
| 4 | Downing, Eric M | 5/23/2014 | |
| scrap D4151-1 B112572 qty x40pcs | | | |
| 5 | Downing, Eric M | 5/23/2014 | |
| Scrap D4148-1 B112245 qty x 40pcs | | | |

Verification & Review

| | | | |
|---------------------------------|--------------------------|-------------|-----------|
| Target Date 5/23/2014 | Owner Hammond, Kelsey | Closed Date | Closed By |
| Details All Actions Complete | | | |

Actions

| Number | Owner | Target Date | Completed Date |
|---------|-------|-------------|----------------|
| Details | | Response | |
| | | | |
| | | | |

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Page 2

Setup Start *NS1*

Stop *NS2*

Customer:

40

40

Run Start *NR1*

Stop *NR2*

NR2

115

QC6- Inspect dimensions to drawing

0.00

115

QC

Memo

0.00

Quality Control

125

0.00

125

Small Fab

Memo

0.00

Small Fab

DEBURR A/R

150

Identify as per dwg & Stock Location:_____ 0.00

0.00

150

Packaging

Memo

0.00

Packaging

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

| Work Order: _____ Part No. _____ NCR No. _____ | | | | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | | AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div> | | | | | |
|--|------|------|-----|--|-------------------|---|-------------|--------------|--------------|--|--|
| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector | | |
| Design | | | | | | | | | | | |
| Doc/Data | | | | | | | | | | | |
| Equip/Tooling | | | | | | | | | | | |
| Handling/Pre | | | | | | | | | | | |
| Material | | | | | | | | | | | |
| Operator | | | | | | | | | | | |
| Offset/Setup | | | | | | | | | | | |
| Process | | | | | | | | | | | |
| Supplier | | | | | | | | | | | |
| Training | | | | | | | | | | | |
| Transport | | | | | | | | | | | |
| Unapproved | | | | | | | | | | | |

| FAULT CATEGORY | | | |
|--|--|---|---|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other _____ _____ _____ |

Work Order ID 110308

110308

Page 3

Item ID: D4151-3

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Upper Hardpoint Plate

Start Date: 17/12/2013 Start Qty: 40.00

40

Cust Item ID:

Required Date: 17/12/2013 Req'd Qty: 40.00

40

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

0.00

Quality Control

ME
14-5-22

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

| | | |
|--|--|---|
| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div> |
|--|--|---|

| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design | | | | | | | | | |
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Handling/Pre | | | | | | | | | |
| Material | | | | | | | | | |
| Operator | | | | | | | | | |
| Offset/Setup | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
| Transport | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| | | | |
|--|--|---|--|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other |
|--|--|---|--|

Picklist Print

Page 1

February-13-14 1:19:23 PM

Work Order ID: 110308

110308

Parent Item: D4151-3

D4151-3

Parent Item Name: Upper Hardpoint Plate

Start Date: 17/12/2013

Required Date: 17/12/2013

Start Qty: 40.00

Required Qty: 40.00

Comments:

IPP Rev:A 10.06.24 new issue DD verf:EC

IPP Rev:B 11.01.21 as per dwg revC DD verf:JLM

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| D4151-3P | | Purchased | | No | | | Each | 0.0000 | | 40 | | | |
| *D4151-3P* | | | | | | | | | ** | | | | |
| Upper Hardpoint Plate | | | | | | | | | | | | | |

Handwritten signature
44/01/9 *(40)*

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

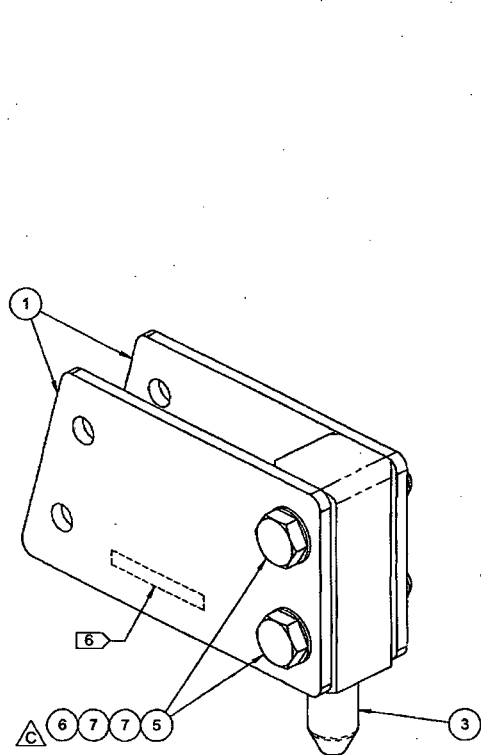
Work Order update only ☐

| | | | | | | | | | | | | | | | | | | |
|--|--|--|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> | |
| Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> | | | | | | | | | | | | | | | | |

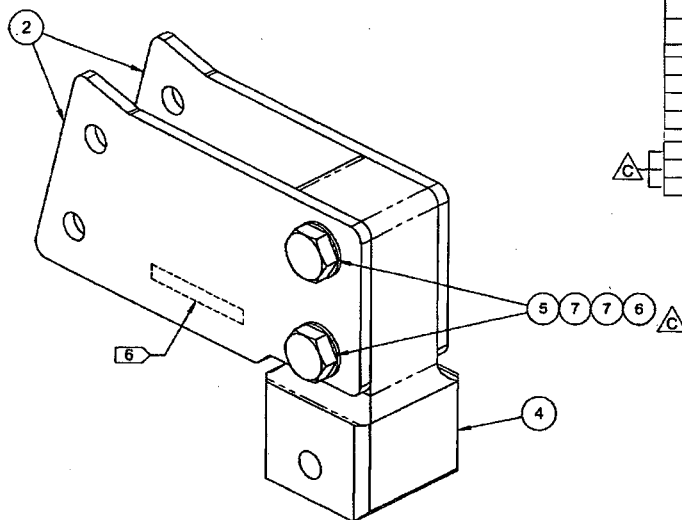
| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design | | | | | | | | | |
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Handling/Pre | | | | | | | | | |
| Material | | | | | | | | | |
| Operator | | | | | | | | | |
| Offset/Setup | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
| Transport | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| | | |
|--|--|---|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other |
|--|--|---|



D4151-041 BASKET FWD HARDPOINT ASSY (LOWER)



D4151-043 BASKET FWD HARDPOINT ASSY (UPPER)

| ITEM | QTY -041 | QTY -043 | P/N | DESCRIPTION |
|------|-------------|-------------|---------------|-----------------------------------|
| | X | | D4151-041 | BASKET FWD HARDPOINT ASSY (LOWER) |
| | | X | D4151-043 | BASKET FWD HARDPOINT ASSY (UPPER) |
| 1 | 2 | | D4151-1 | LOWER HARDPOINT PLATE |
| 2 | | 2 | D4151-3 | UPPER HARDPOINT PLATE |
| 3 | 1 | | D4151-5 | FWD BASKET INSTL STUD (LOWER) |
| 4 | | 1 | D4151-7 | FWD EYEBOLT RECEIVER (UPPER) |
| 5 | 2 | 2 | AN4C13A | BOLT |
| 6 | 2 | 2 | MS21043-4 | NUT |
| 7 | 4 | 4 | NAS1149C0432R | WASHER |

110308 MJS
13-12-18

RELEASED
2011-01-18

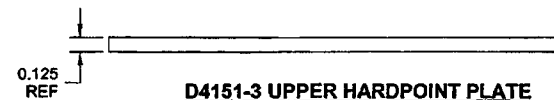
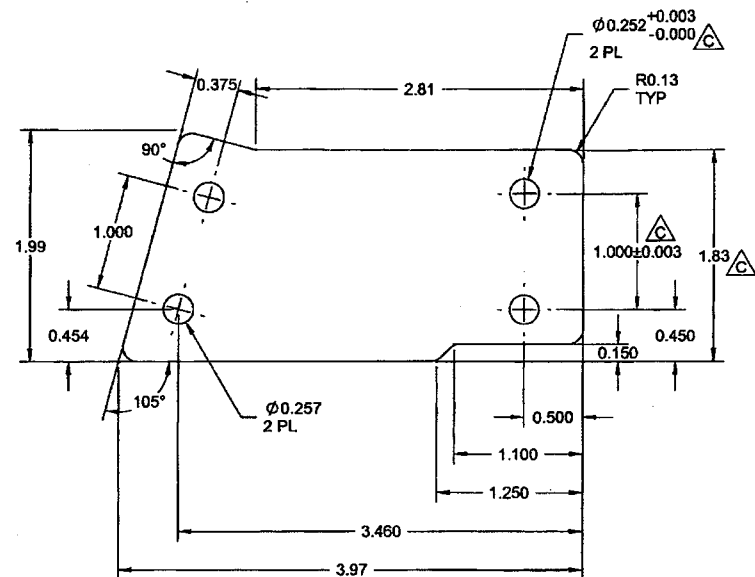
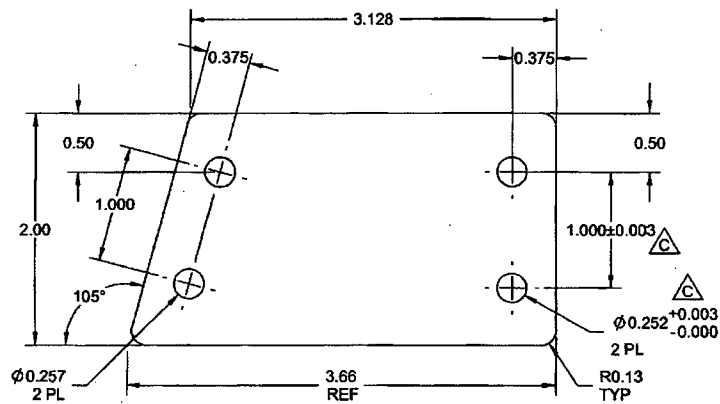
- NOTES:**
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4151-04X" USING FINE POINT PERMANENT INK MARKER
 - 7) WEIGHT:
 - D4151-041 = 0.88 lbs
 - D4151-043 = 1.17 lbs

| | | | |
|------------|--|----|----------|
| C | AM4 HARDWARE WAS AN3 (B2-1, C3-1 & D3-1); Ø0.252 WAS Ø0.191 (C5-2, D1-2); TIGHTENED TOL ON 1.000 DIM (C5-2, D1-2, C7-3, C3-3); Ø0.250 WAS Ø0.191 (C6-3, B4-3); 1.83 WAS 1.75 (C1-2), 2.84 WAS 2.78 (B3-3) AND 1.88 WAS 1.80 (C1-3) TO PRESERVE 1.5ED. REASON: SEE D407-797 DESIGN JOURNAL. | MB | 10.12.14 |
| B | ADDED D4151-5/7 (SHT 3); D4151-5 WAS D3911-1 (ZN B6-1 & D3-1); D4151-7 WAS D3911-3 (ZN C4-1 & D3-1) ITEMS #5, 6 & 7 REPLACE MS20815-4M20 (ZN C3-1, D3-1 & B8-1); Ø0.191 2 PL REPLACES Ø0.129 3 PL (ZN C5-2); Ø0.191 2 PL REPLACES Ø0.129 4 PL (ZN D1-2). REASON: SEE TR-D330-007-2 REV. B. | MB | 10.07.05 |
| A | NEW ISSUE | MB | 10.06.22 |
| REV. | DESCRIPTION | BY | DATE |
| DESIGN | | | |
| DRAWN | | | |
| CHECKED | | | |
| MFG. APPR. | | | |
| APPROVED | | | |
| DE APPR. | | | |
| DATE | 10.12.14 | | |

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D4151** REV. C
SHEET 1 OF 3
TITLE **BASKET FWD HARDPOINT** SCALE NTS

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NOTES:

1) MATERIAL: 303/304/316 STAINLESS STEEL SHEET ANNEALED 2B, 0.125 THK
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240
REF. DART SPEC. M304S11GA OR M303S11GA

2) FINISH: NONE

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: IDENTIFY AT ASSEMBLY

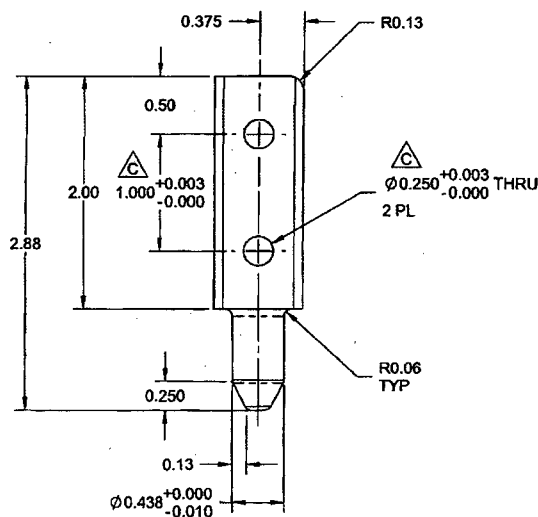
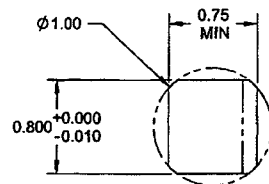
7) WEIGHT:

- D4151-1 = 0.24 lbs

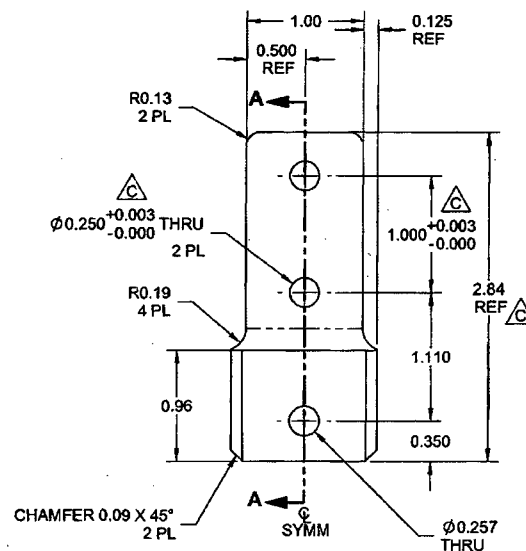
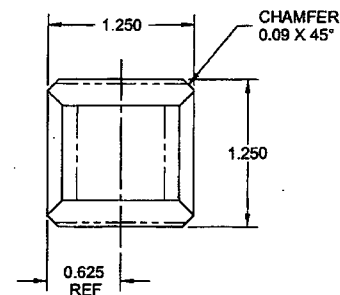
- D4151-3 = 0.23 lbs

RELEASED
2011-01-18
JMD

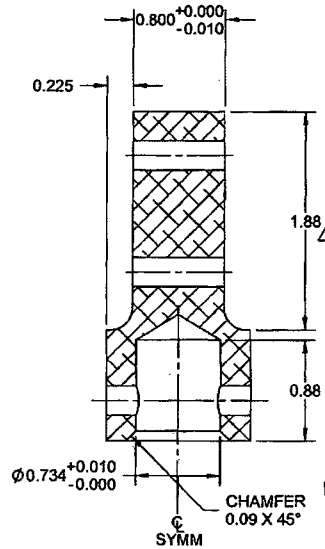
| | | | | |
|------------|----------|--|-----------------------------|--------------|
| DESIGN | | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | | |
| DRAWN | | | | |
| CHECKED | SC | | DRAWING NO. | REV. C |
| MFG. APPR. | SC | | D4151 | SHEET 2 OF 3 |
| APPROVED | AMP | | TITLE | SCALE |
| DE APPR. | AMP | | BASKET FWD HARDPOINT | NTS |
| DATE | 10.12.14 | COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISSEMINATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. | | |



D4151-5 FWD BASKET INSTL STUD (LOWER)



D4151-7 FWD EYEBOLT RECEIVER (UPPER)



SECTION A-A

NOTES:

- 1) MATERIAL -5: 303/304/316 STAINLESS STEEL ROUND BAR, PER ASTM A276 OR ASTM A582
PER DART SPEC M303R OR M304R
- 7: 303/304/316 STAINLESS STEEL BAR, PER ASTM A276 OR ASTM A582
PER DART SPEC M303B OR M304B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT ASSEMBLY
- 7) WEIGHT -5: 0.36 lbs
-7: 0.70 lbs

| | | | |
|------------|----------|--|--------------|
| DESIGN | | DART AEROSPACE LTD | |
| DRAWN | | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | | DRAWING NO. | REV. C |
| MFG. APPR. | | D4151 | SHEET 3 OF 3 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | BASKET FWD HARDPOINT | NTS |
| DATE | 10.12.14 | COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. | |

RELEASED
R 2011-00-30
RELEASED



55 Northfield Dr., E., Box 339
Waterloo, On. N2K 3T6
(519)570-6590
F. (519)893-4252

Certificate of Compliance

Sold To: DART Aerospace

Purchase Order Nu ID PO23011

| Item | Quantity | Part Number | Revision | Description | Mtl. / Thk. | HT Number |
|--------|----------|-------------|----------|----------------|-------------------|-------------|
| 6(19) | 12 | D2803-1 | b | BRACKET | 6061-T6 / 0.50" | 11/12/168D0 |
| 23(20) | 12 | D2803-2 | b | BRACKET | 6061-T6 / 0.50" | 11/12/168D0 |
| 5(18) | 12 | D2804-1 | c | BRACKET | 6061-T6 / 0.50" | 11/12/168D0 |
| 4(17) | 12 | D2804-2 | c | BRACKET | 6061-T6 / 0.50" | 11/12/168D0 |
| 10(9) | 10 | D4093-3 | d | BRACKET | 6061-T6 / 0.750" | 22/11/036D6 |
| 20(6) | 30 | D3065-5 | b | STEP LEG | 5052-H32 / 0.080" | 3C529#2 |
| 24(24) | 24 | D2561P | b | LUG | 6061T6 / 0.25" | 08/11/010D6 |
| 3(18) | 150 | D2838 | c | CLAMP | 304 SS / 0.063" | A1303988 |
| 17(16) | 60 | D2519 | d | CLAMP | 304 SS / 0.063" | A1303988 |
| 2(17) | 40 | D3414-1F | c | CLAMP | 304 SS / 0.100" | 500400 |
| 15(14) | 60 | D4149-1 | c | CROSSTUBE LUG | 304 SS / 0.120" | 350420 |
| 12(11) | 40 | D4150-3 | b | ARM PLATE | 304 SS / 0.120" | 350420 |
| 13(12) | 40 | D4151-1 | c | L HARDPOINT PL | 304 SS / 0.120" | 350420 |
| 14(13) | 40 | D4515-3 | c | U HARDPOINT PL | 304 SS / 0.120" | 350420 |
| 16(15) | 40 | D4148-1 | c | CROSSTUBE LUG | 304 SS / 0.120" | 350420 |

This is to certify that the whole of the supplies detailed hereon has been inspected, tested, packed, and unless otherwise stated, conform in all respects with the requirements of the contract or order.

Name: Derek Loebsack

Title: President

Sign:

Dated:

05-01-14



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO23011

Purchase Order Date 2/14/2014

PO Print Date 2/14/2014

Page Number 5 of 9

Order From :

VC-LWC001

LOEBSACK WATERJET CANADA LTD.
55 NORTHFIELD DR. E.
P.O.BOX 339

WATERLOO, ONTARIO N2K 3T6

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

Ship To Contact

Ship To Phone

Ship Via:

FedEx PI collect

Ship Acct:

Buyer

Michael Gregoire

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Total: \$218.00

| | | | | | | | |
|----|----------|-----------------------|-----------|-------|---|--------|----------|
| 14 | D4151-3P | Upper Hardpoint Plate | 3/28/2014 | 40.00 | ✓ | \$5.45 | \$218.00 |
| | | | Yes | Each | | | |
| | | | 3/28/2014 | | | | |

Manufacture as per drawing D4151 rev.c
B110308

Line Total: \$218.00

| | | | | | | | |
|----|----------|--------------------------|-----------|-------|--|---------|------------|
| 15 | D4149-1P | Crosstube Lug Plate, Aft | 3/28/2014 | 60.00 | | \$18.95 | \$1,137.00 |
| | | | Yes | Each | | | |
| | | | 3/28/2014 | | | | |

Manufacture as per drawing D4149 rev.c
B112484

Line Total: \$1,137.00

| | | | | | | | |
|----|----------|--------------------------|-----------|-------|--|---------|------------|
| 16 | D4148-1P | Crosstube Lug Plate, Fwd | 3/28/2014 | 40.00 | | \$29.10 | \$1,161.00 |
| | | | Yes | Each | | | |
| | | | 3/28/2014 | | | | |

Manufacture as per drawing D4148 rev.c
B112245

PO Instructions: PROCUREMENT QUALITY CLAUSES

A005 RIGHT OF ENTRY

A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A042 DART NOTIFICATION BY SUPPLIER

Note:

THYSSENKRUPP MATERIALS NA

Certificate of Mill Test Results

PO/Rel

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Signed by:

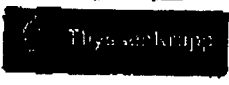
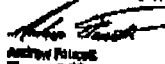
BL PEC-000000-000

Pg 1/1

PART NO.

Arm: RICK

1846

|  ThyssenKrupp Stainless USA | | INSPECTION CERTIFICATE CERTIFICADO DE INSPECCION AMMUNITIONSPRUEFUNG according to / de acordo com French EN 10204-3.1 | | Inspection number / YB17000 0000032224 / Page / Page / Seite 1 / 1 | | | | | | | | | | | | | | | | | |
|--|------------------------------------|---|---|---|---|---|-------|---------|-----|-----------|--------------|--------------|------|-----------|--------------|--------------|-------|--------|-------|------|-------|
| 1 ThyssenKrupp Drive, P.O. Box 13000, Calvert, AL 36613-1300 CLUB METALS SALES LIMITED 988 DERRY ROAD EAST SUITE 306 MISSISSAUGA ON L6T 2J8 CANADA | | | Customer's name / Nom du client / Kundenname CLUB METALS SALES LIMITED, MISSISSAUGA Customer's address / Adresse du client / Kundenadresse TO-1846 Manufacturer's name / Nom du fabricant / Herstellername 901147789 / 901 Delivery date / Date de livraison / Lieferungsdatum 05220223 / 010 Product / Produit / Produkt SHEETPIEDS/BLUCH Steel grade and quality / Acier / Stahlgüte und Qualität TYPE 304L/304 | | | | | | | | | | | | | | | | | | |
| Type of delivery / Condition de livraison / Lieferungsart ASTM A400200PL, ASME SA-240 Seals Part A Ed.2010 ASTM A400200PL, ASME SA-240 Seals Part A Ed.2010 | | | | | | | | | | | | | | | | | | | | | |
| Customer's name / Nom du client / Kundenname 306 inch x 1,219,20 mm x 2,438,40 mm 0,1250 inch x 48,0000 inch x 95,0000 inch | | Product description / Description du produit / Produktbeschreibung 306 inch x 1,219,20 mm x 2,438,40 mm 0,1250 inch x 48,0000 inch x 95,0000 inch | | Quantity / Quantité / Menge ADD Unit / Unité / Einheit 612.75 | | | | | | | | | | | | | | | | | |
| Delivery date / Date de livraison / Lieferungsdatum 05/10/15 05/10/15 | Unit / Unité / Einheit 32 32 | Weight / Poids / Gewicht 4,860 lb / 2,218 kg 4,860 lb / 2,218 kg | Unit / Unité / Einheit 713000 713000 | Price / Prix / Preis 891420 560420 | Quantity / Quantité / Menge 100008830 100008830 | | | | | | | | | | | | | | | | |
| Unit / Unité / Einheit 34 0,775 lb / 0,354 kg | | | | | | | | | | | | | | | | | | | | | |
| Chemical composition / Composition chimique / Chemische Zusammensetzung <table border="1"> <thead> <tr> <th>% C</th> <th>% Si</th> <th>% Mn</th> <th>% P</th> <th>% S</th> <th>% Cr</th> <th>% Ni</th> <th>% N</th> </tr> </thead> <tbody> <tr> <td>0.028</td> <td>0.30</td> <td>1.65</td> <td>0.027</td> <td>0.0018</td> <td>18.05</td> <td>9.08</td> <td>0.080</td> </tr> </tbody> </table> | | | | | | % C | % Si | % Mn | % P | % S | % Cr | % Ni | % N | 0.028 | 0.30 | 1.65 | 0.027 | 0.0018 | 18.05 | 9.08 | 0.080 |
| % C | % Si | % Mn | % P | % S | % Cr | % Ni | % N | | | | | | | | | | | | | | |
| 0.028 | 0.30 | 1.65 | 0.027 | 0.0018 | 18.05 | 9.08 | 0.080 | | | | | | | | | | | | | | |
| Transverse <table border="1"> <thead> <tr> <th>Yield strength / Résistance à la traction / Zugfestigkeit</th> <th>TS</th> <th>EL. EL*</th> <th>HRB</th> </tr> </thead> <tbody> <tr> <td>100008830</td> <td>45,000 / 302</td> <td>80,113 / 642</td> <td>96.8</td> </tr> <tr> <td>100008832</td> <td>45,045 / 305</td> <td>80,113 / 642</td> <td>96.1</td> </tr> </tbody> </table> | | | | | | Yield strength / Résistance à la traction / Zugfestigkeit | TS | EL. EL* | HRB | 100008830 | 45,000 / 302 | 80,113 / 642 | 96.8 | 100008832 | 45,045 / 305 | 80,113 / 642 | 96.1 | | | | |
| Yield strength / Résistance à la traction / Zugfestigkeit | TS | EL. EL* | HRB | | | | | | | | | | | | | | | | | | |
| 100008830 | 45,000 / 302 | 80,113 / 642 | 96.8 | | | | | | | | | | | | | | | | | | |
| 100008832 | 45,045 / 305 | 80,113 / 642 | 96.1 | | | | | | | | | | | | | | | | | | |
| Test of tensile strength / Essai de traction / Zugversuch OK OK | | | | | | | | | | | | | | | | | | | | | |
| No harmful impurities of Mercury compounds were made or used Free of radioactive contamination EU RoHS Directive 2002/95/EC Compliant Country of Heat in per ISO 1585-1 | | | | | | | | | | | | | | | | | | | | | |
| ThyssenKrupp Stainless USA, LLC An ISO 9001:2008 certified company | | | The information provided is a true copy of data on file / Les informations fournies sont une copie exacte des données / Die bereitgestellten Informationen sind eine Kopie der Daten  Andrew Pollock Phone: +1 281 820 3402 | | | | | | | | | | | | | | | | | | |